IN THE CLAIMS:

Please cancel claims 1-16 without prejudice or disclaimer, and substitute new Claims 17-32 therefor as follows:

Claims 1-16 (Cancelled).

17. (New) A radio telephony network supporting at least one link of a radio channel for a packet data transmission service comprising:

a plurality of network controllers, each network controller being connected via an interface to at least one base radio station, said base radio station supervising at least one macrocell; and

at least one base radio microstation connected to the network controller via an interface of the same type as that connecting said base radio station to the network controller, said at least one base radio microstation supervising at least one microcell incorporated in at least one macrocell and centered at a point different from the point at which said macrocell is centered, said at least one base radio microstation providing said packet data transmission service in said microcell on at least one link of said radio channel.

18. (New) The network as claimed in claim 17, wherein said at least one base radio microstation provides said packet data transmission service by using a multi-carrier radio access.

19. (New) The network as claimed in claim 18, wherein said multi-carrier radio access is of the OFDM type.

20. (New) The network as claimed in claim 17, wherein each base radio microstation comprises a central switch and a plurality of access ports connected to said central switch by a cable.

21. (New) The network as claimed in claim 17, wherein each base radio microstation comprises a protocol structure including a first protocol level and a second protocol level located above said first protocol level, said first protocol level being a physical level and said second protocol level being a data transmission level.

22. (New) The network as claimed in claim 21, wherein said first protocol level comprises circuit components for processing a multi-carrier radio signal, said multi-carrier radio signal being formed from a plurality of radio carriers associated with data to be transmitted.

23. (New) The network as claimed in claim 22, wherein said circuit components for processing said multi-carrier radio signal comprise dedicated circuits and/or programmable DSPs.

24. (New) The network as claimed in claim 21, wherein said data transmission level comprises an access control sub-level including a logical entity for controlling said multi-carrier radio access.

25. (New) The network as claimed in claim 24, wherein said logical entity maps logical channels on transport channels.

26. (New) The network as claimed in claim 24, wherein said logical entity implements functions of retransmission of incorrectly received data packets.

27. (New) The network as claimed in claim 24, wherein said logical entity implements scheduling functions.

28. (New) The network as claimed in claim 24, wherein said access control sub-level comprises a frame protocol for controlling the transport of said multi-carrier radio signal between said base radio microstation and the network controller connected to it.

29. (New) The network as claimed in claim 28, wherein said central switch comprises said logical entity and said frame protocol and each access port comprises said first protocol level including said circuit components for processing said multi-carrier radio signal.

30. (New) The network as claimed in claim 22, wherein each network controller comprises an access control sub-level, and a frame protocol for controlling the transport of said multi-carrier radio signal within said network controller or between said network controller and the base radio microstation connected to it.

31. (New) The network as claimed in claim 22, wherein said at least one base radio microstation can provide said packet data transmission service to at least one user equipment located in the microcell served by said base radio microstation, said user equipment having a protocol structure including a physical level comprising circuit components for demodulating said multi-carrier radio signal.

32. (New) The network as claimed in claim 17, wherein said at least one link of said radio channel is a downlink.